

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCE

PERMITTEE

SKF Sealing Solutions
Attn: Christine Kessler
900 North State Street
Elgin, Illinois 60123-2147

Application No.: 72111195

I.D. No.: 089438AAB

Applicant's Designation:

Date Received: June 26, 2002

Subject: Sealing Products

Date Issued: TO BE DETERMINED

Expiration Date: 5 YEARS

Location: 900 North State Street, Elgin

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a sealing products manufacturing operation, which includes four adhesive lines (Nutro spray booth, tumbler, two screw cementers and adhesive line #4) all controlled by a Regenerative Thermal Oxidizer (RTO), water-based coating lines, Aerospace RACE Chemline/Spraybooth, spray and dip booths, material storage and mixing operations, gas-fired boilers/space heaters, and ancillary equipment pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1a. This federally enforceable state operating permit is issued:

- i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/yr for VOM, 10 tons/yr for a single HAP and 25 tons/yr for combined HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - iii. To limit the maximum theoretical emissions of VOM from the source to less than 100 tons/year and the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is exempt from the limitations in 35 IAC Part 218, Subpart PP: Miscellaneous Fabricated Product Manufacturing Processes. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
 - c. This permit supersedes all operating permits issued for this location.

2. The two gas-fired boilers associated with the phosphating line are subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60 Subparts A and Dc. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.

Note: because these boilers only burn natural gas, a gaseous fuel with potential sulfur dioxide emissions rate of 0.32 lb/mmBtu heat input or less, the only requirement of Subpart Dc for these existing boilers is to maintain calendar month records of the fuel usage (See also Condition 9(b) (i) (A)).

- 3a. The adhesive lines and the water-based coating lines and spray and dip operations are subject to 35 IAC 218.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Condition 3b (See also 35 IAC 218.302) and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material.
- b. Emissions of organic material in excess of those permitted by Condition 3a (See also 35 IAC 218.301) are allowable if such emissions are controlled by the RTO so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water.
- 4a. Emissions and operation of all natural gas combustion equipment shall not exceed the following limits:

Fuel Usage		Pollutant	Emissions	
(mmscf/Mo)	(mmscf/Yr)		(Tons/Mo)	(Tons/Yr)
33	327	NO _x	1.7	16.4
		CO	1.4	13.7
		PM/PM ₁₀	0.2	1.3
		VOM	0.2	0.9
		SO ₂	0.1	0.1

These limits are based on standard AP-42 emission factors for natural gas combustion, maximum firing rates, maximum hours of operation, and a conversion factor of 1,000 Btu/scf. Compliance with annual limits shall be determined from a rolling total of 12 months of data.

- b. Natural gas shall be the only fuel fired in the fuel combustion equipment at this facility.
- 5a. The RTO shall be in operation at all times when any of the four adhesive lines associated with the RTO are in operation and emitting air contaminants.
- b.
 - i. The RTO shall be operated to achieve at least 86% destruction of organic material emissions.
 - ii. The permanent total enclosure (PTE) installed on the adhesive lines shall meet the requirements of PTE, which are established in 35 IAC 218, Appendix B, Procedure T. As a result, the capture efficiency of VOM on the adhesive lines is assumed to be 100 percent.

- c. The RTO combustion chamber shall be preheated to at least the manufacturer's recommended temperature but not lower than 1500°F. This temperature shall be maintained during operation.
- d. The RTO shall be equipped with a continuous monitoring system which is installed, calibrated, maintained, and operated according to vendor specifications at all times the RTO is in use, to monitor the combustion chamber temperature.
- e. Emissions and operation of the four adhesive lines controlled by RTO shall not exceed the following limits. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

<u>Material</u>	VOM Usage (Lb/Mo)	HAP Usage (Lb/Mo)	Emissions			
			VOM (Lb/Mo)	VOM (T/Yr)	HAP (Lb/Mo)	HAP (T/Yr)
Adhesive	2,750	1,293	385	2.31	181	1.09
Solvent	8,870	4,435	1,242	7.45	621	3.73
Total:	11,620	5,728		9.76		4.82

These limits are based on material balance and an overall control efficiency of 86.0% (100% capture and 86.0% control).

Note: uncontrolled emissions for this equipment are limited to 69.72 tons per year VOM ($11,620 \times 12 / 2000 = 69.72$).

- 6a. Emissions and operation of the uncontrolled adhesive lines, water-based coating lines, and Aerospace RACE Chemline/Spraybooth, and spray and dip operations shall not exceed the following limits. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

<u>Material</u>	VOM Usage (Lb/Mo)	VOM Emissions	
		(Ton/Mo)	(Ton/Yr)
Cements and Adhesives	1,383	0.69	8.3
Solvent-based Coating	100	0.05	0.6
Water-based Coating	120	0.10	0.8
Solvents	416	0.21	2.5
		Total:	12.2

- b. This permit is issued based upon negligible emissions of particulate matter from the spray booths controlled by fabric filter. For this purpose, emissions from all such sources shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/yr.
7. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

8. This permit is issued based upon negligible emissions of VOM from ancillary operations including mold cleaning tank, Boretite paint mixing and drumming operation, electric silicon oven, electric rubber ovens, electric heat treat ovens, and other ancillary operations not limited elsewhere in this permit. For this purpose, emissions from all such units combined shall not exceed nominal emission rates of 330 lb/month and 2.0 tons/yr.
- 9a. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.
- b. The Permittee shall keep records of the following items:
 - i. For the fuel combustion equipment:
 - A. Natural gas usage (mmscf/month and mmscf/year);
 - B. Monthly and annual NO_x, CO, VOM, PM/PM₁₀, and SO₂ emissions with supporting documentation and calculations (tons/month and tons/year).
 - ii. For the adhesive lines connected to the RTO:
 - A. Adhesive usage and solvent usage (gallons/month and gallons/year).
 - B. VOM and HAP content of adhesives and solvents (pounds/gallon).
 - C. Adhesive VOM usage and solvent VOM usage (pounds/month).

- D. Adhesive HAP usage and solvent HAP usage (pounds/month).
 - E. Monthly and annual VOM and HAP emissions with supporting documentation and calculations (pounds/month and tons/year).
- iii. For the RTO (daily basis):
- A. RTO combustion chamber monitoring data;
 - B. A log of operating time for the capture system, RTO, monitoring equipment and the associated adhesive lines; and
 - C. A maintenance log for the capture system, RTO and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- iv. For the uncontrolled adhesive lines, water-based coating lines and spray and dip operations:
- A. Usage of each material (gallons/month and gallons/year).
 - B. VOM and HAP content of each material used (pounds/gallon).
 - C. VOM usage of each material (pounds/month).
 - D. Monthly and annual VOM and HAP emissions with supporting documentation and calculations (pounds/month and tons/year).
- v. A file containing the maximum expected annual VOM emissions from equipment identified in Condition 8.
- c. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Agency request for records during the course of a source inspection.
10. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to Illinois EPA's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
11. Two (2) copies of required reports and notifications shall be sent to:
- Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
- and one (1) copy shall be sent to Illinois EPA's regional office at the

following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that the following equipment is exempt from state permit requirements:

<u>Item of Equipment</u>	<u>Exemption</u>
R&D Laboratories	35 IAC 201.146(f)
Rubber Mixers and Mills w/Filter	35 IAC 201.146(aa)
Sand Blaster w/Fabric Filter	35 IAC 201.146(aa)
Tool Room Grinders w/Baghouse	35 IAC 201.146(aa)
Metal Prep Lines	35 IAC 201.146(oo)

It should also be noted that the following ancillary operations are also listed as exempt under 35 IAC 201.146; however, the source is required to include these units in this FESOP to avoid triggering the requirements of 35 IAC Part 205 and 35 IAC Part 218 Subpart PP. The potential emissions of these units and other small units are limited in Condition 8.

<u>Item of Equipment</u>	<u>Exemption</u>
Rubber curing ovens	35 IAC 201.146(d)
Boretite paint mixing and drumming	35 IAC 201.146(hh)
Heat Treat Ovens	35 IAC 201.146(d)
Gaseous fuel space heaters	35 IAC 201.146(d)
Mold cleaning tank	35 IAC 201.146(oo)
Metal treating lines	35 IAC 201.146(d)

If you have any questions on this, please call Jason Schnepf at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JMS

cc: Illinois EPA, FOS Region 1
LOTUS NOTES

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the sealing products manufacturing operation operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., 100 tons per year of VOM, 10 tons per year of a single HAP, and 25 tons per year of combined HAPs at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Emission Unit</u>	Emissions (Tons/Year)					Single <u>HAP</u>	Total <u>HAP</u>
	<u>NO_x</u>	<u>CO</u>	<u>VOM</u>	<u>PM</u>	<u>SO₂</u>		
Adhesive Lines	-	-	9.76	-	-	5.79	5.79
Ancillary Operations	-	-	2.0	-	-	-	-
Water-based coating lines and spray and dip operations	-	-	11.6	0.44	-	2.1	10.8
Solvent-based coating			0.6				
Fuel Comb. Equipment	16.4	13.7	0.9	1.3	0.1	-	-
Totals:	16.4	13.7	24.86	1.74	0.1	< 10	< 25